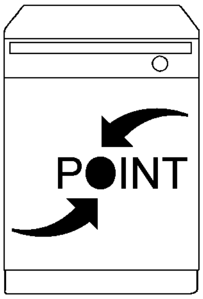
SERVICE

Whirlpool Europe
Customer Services

Whirlpool



Service Manual

Dishwasher
ADP 5967 WHM

Model ADP 5967 WHM
Version 8542 967 61720

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Family	VBL - HIGH 6 Sensor 2

Date: 11.03.2004 (Mod. 01) Subject to modification
Document-No.: 4812 718 16939

Technical data

Dimension of Free standing appliances with rounded outer door

Height	85.0	cm
Width	59.7	cm
Depth	61.0	cm
Weight	59	kg

Electronic boards

Service boards	see spare part list
Serial boards	see on the boards itself
DUB	4619 724 04851

Programing of version and programmed control board, see „Service“ and „Data set“ on rating plate of inner door:

CB programmed	446811
Data set	446801

Basic control board, not programmed see on the board itself 4619 724 17451

Succession of programs

Programs	see program diagram
Succession	A1a - A2a - A3a - A5a - A8a - A9a

Datas Energy Label

Reference program	A5a
Energy Performance	A
Cleaning Performance	A
Drying Performance	A

Alarms

Refill rinse aid
Refill salt

Options

Zone washing
Delay function

Program information

Start indicator
Pre wash
Main wash
Drying
End

All programs will be locked after start. Changing the program or finishing the program will be possible only after pressing the start button for longer then 1.5 sec. (Break by customer)

A switching off the appliance or unplug the appliance for a while, this will frozen the program step and later on, the program continuos on the same position.

Exception: Switching off the appliance or unplug the appliance during the drying phase, this will lead directly to the end of the program.

Water Volume at alternating spray system

Volume at alternating spray system (same level when selected zone washing as in the normal programs)

Water	Volume	Level
Regeneration	0.3 l	15 mm
Back rinse 3x	1.0 l	60 mm
Prewash	3.9 l	120 mm
Main wash	3.2 l	118 mm
Intermediate rinse 1	3.2 l	118 mm
Intermediate rinse 2	3.2 l	118 mm
Clear rinse	3.2 l	118 mm
Safety/ overflow	8.5 l	141 mm

Measuring the level

Remove the coarse sieve, put in a measuring meter into the sump, measure the hight of the water level.

Detergent max.

Pre-wash	10	cm^3
Main-wash	40	cm^3
Rinse aid	135	cm^3
6 Dosage steps	1 - 6	ml

Water softener

Saltcontainer	2	kg
Resin container	900	cm^3
Regeneration dosage	300	cm^3

Technical data

Water pressure

Inlet pressure	0.3 - 10	bar
Spray pump pressure	0.3	bar

Rotations

Spray pump motor	2800	RPM
Drain pump motor	3000	RPM
Spray arm lower	30 - 40	RPM
Spray arm upper	30 - 40	RPM
Fan for drying	2500	RPM

Spray arms, turning rhythm at alternating spray system

Turning starts every time with the upper spray arm

Pre wash Lower arm ~3min, Upper arm ~1min
Main wash Lower arm ~3min, Upper arm ~5min
Intermediate rinse
Lower arm ~2min, Upper arm ~2min
Final rinse Lower arm ~2min, Upper arm ~2min
Service Test program
Lower arm ~30sec, Upper arm ~30sec

Remark: When switching of the main switch or interrupt the mains during the Test Program runs, then the alternating of the spray arms change in the test program to the rhythm of main wash 5/3 min.

Important: To leaf the Test program is possible by made a break by customer (pushing the start button for 1.5 sec.)
After finishing the test program (End LED shines and/or Start LED goes of) must the appliance be switched off.
If this will not be done, then the next normal wash will be made with the frequency of the Service Test Program ~30/30sec.

Flow rates/ Inlet volume

Flow meter (at 0.3 bar = quantity 1.1 l/min)	208	Imp/l
Spray pump	45 - 65	l/min
Drain pump	16	l/min
Pump height max.	1.1	m
Inlet valve	4	l/min
Spray arm lower	~ 33	l/min
Sprayarm upper	~ 27	l/min
Shower top	~ 8	l/min

Fan for drying:

Total	900	l/min
Primary air flow	210	l/min
Secondary air flow	780	l/min

Electrical base data

Voltage	220/ 230	V
Frequency	50	Hz
Total power	2.0 - 2.2	kW
Fuse	10	A

Motor

Spray pump motor alternating spray system

Voltage	220/ 240	V
Power consumption	125	W
HI	79	Ω
HA	60	Ω
Capacitor	4	µ F

Drain pump motor

Voltage	220/ 240	V
Power consumption	30	W
Resistance	146	Ω

Fan for drying

Voltage	220 - 240	V
Resistance	141	Ω

Heating

1 Element system

Voltage	220/ 230	V
Power consumption	1.87/ 2.04	kW
Resistance	24.5	Ω
Heating speed	~ 2.0	˚C/min
Temperature on surface	~ 115	˚C
Safety thermostat self reset (Temperature of water)	~ 85	˚C
Fuse	206	˚C

Potentiometer

Points of meassurement:	1(black) to 2 (middle)	
Position 0	0.0	kΩ
Position 1	0.5	kΩ
Position 2	1.0	kΩ
Position 3	1.4	kΩ
Position 4	1.8	kΩ
Position 5	2.3	kΩ
Position 6	2.6	kΩ

Technical data

Double electric inlet valve

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	2.0	kΩ

Regenerating valve

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	3.13	kΩ

Motor Diverter Valve

Voltage	220 - 240	V
Frequency	50/ 60	Hz
Resistance	6.5	kΩ
Signal (2x within ~13 sec.)	5.0	V

Coil of dispenser

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	1.3	kΩ

Reed contacts

flow meter
salt control
rinse aid control

Optical water indicator (OWI)

Optical measurement of the water in sump
Combination part of:

Turbidity sensor	(DON)
Thermostat temp. sensor	(notice NTC)

NTC

20 °C	58.1	kΩ
25 °C	47.1	kΩ
30 °C	38.2	kΩ
40 °C	25.4	kΩ
50 °C	17.2	kΩ
60 °C	11.8	kΩ
70 °C	8.3	kΩ
80 °C	6	kΩ
85 °C	4	kΩ

Regeneration

Volume	300	cm^3
Position 0		
after wash cycles	12	
water hardness	0 - 5	°dh
	0 - 0.9	mmol/l
	0 - 9	°Fh
Position 1		
after wash cycles	10	
water hardness	6 - 10	°dh
	1 - 1.8	mmol/l
	10 - 18	°Fh
Position 2		
after wash cycles	7	
water hardness	11 - 15	°dh
	1.9 - 2.7	mmol/l
	19 - 27	°Fh
Position 3		
after wash cycles	5	
water hardness	16 - 21	°dh
	2.8 - 3.7	mmol/l
	28.37	°Fh
Position 4		
after wash cycles	3	
water hardness	22 - 28	°dh
	3.8 - 5.0	mmol/l
	38 - 50	°Fh
Position 5		
after wash cycles	2	
water hardness	29 - 35	°dh
	5.1 - 6.3	mmol/l
	51 - 63	°Fh
Position 6		
after wash cycles	1	
water hardness	36 - 60	°dh
	6.4 - 10.7	mmol/l
	64 - 107	°Fh
Salt consumption for regeneration	77	g
Number of cycles with 2 kg salt	26	

Accesory

If you need spare parts apart from the spare part list have a look in the Service Bulletin 4812 718 40084.

Spare part list

Model ADP 5967 WHM
Service No. 854296761720
Version 854296761720

Pos. No.	12NC Code	Description
003 0	**4812 440 19594**	Traverse
004 0	**4812 440 18952**	Drip tray assy
004 1	**4812 401 18402**	Holder
011 0	**4812 505 18357**	Foot short
022 0	**4812 440 18951**	Side panel left
022 1	**4812 440 18949**	Side panel right
024 0	**4812 440 10417**	Panel, rear
030 0	**4812 440 19755**	Table top WH
034 0	**4812 404 78237**	Spacer
034 1	**4812 404 78242**	Fastener table top
040 1	**4812 417 18774**	Hinge left
040 2	**4812 417 18773**	Hinge right
040 3	**4812 417 18923**	Protector f.door (set)
044 0	**4812 492 38358**	Spring f.door
047 0	**4812 404 48746**	Brake f.door
047 1	**4812 401 18397**	Band,brake
047 2	**4812 404 68023**	Hook
053 0	**4812 440 88888**	Plinth WH
053 4	**4812 440 88932**	Plinth rounded WH
065 0	**4812 466 48051**	Insulation
103 0	**4812 440 19756**	Door outer WH
120 0	**4812 440 19456**	Door,inner
120 1	**4812 440 18969**	Batten
130 0	**4812 417 58361**	Tilt lock cpl. wh
131 0	**4812 401 18416**	Hook lock
191 0	**4812 466 68564**	Gasket door
191 3	**4812 466 68533**	Gasket
192 0	**4812 466 68467**	Gasket, door lower
241 0	**4812 458 19026**	Basket upper straight
241 1	**4812 458 18324**	Holder cups right wh
241 3	**4812 528 88068**	Wheel,basket upper (set)
241 4	**4812 458 18984**	Holder dishes wh
241 5	**4812 535 78043**	Bearing
241 6	**4812 458 18979**	Holder glasses wh
241 7	**4812 404 48683**	Hoop
241 8	**4812 466 68553**	Spacer cap set
242 0	**4812 458 18974**	Basket lower cpl.
242 1	**4812 528 88069**	Wheel,basket lower wh
242 4	**4812 466 48059**	Fixation wh
242 6	**4812 458 18977**	Support plate left
242 7	**4812 458 18978**	Support plate right
243 0	**4812 458 18272**	Basket cutlery
243 5	**4819 310 39859**	Cutlery basket KIT
243 6	**4812 458 18996**	Grille wh
261 0	**4819 462 38271**	Rail telescope, inner
261 1	**4812 462 79768**	Cap rail
261 2	**4812 462 78995**	Cap rail ahead
263 0	**4819 520 18013**	Ball cage cpl.
263 1	**4812 520 48001**	Ball Niro 8 D
265 0	**4812 404 48637**	Basket adjustm. cpl.
265 2	**4812 404 48638**	Grip basket adjustment
303 1	**4812 460 38092**	Plate,handle WH
322 0	**4812 453 71299**	Insert panel
331 0	**4812 413 59028**	Knob program cpl. WH
332 0	**4812 410 28669**	Button WH

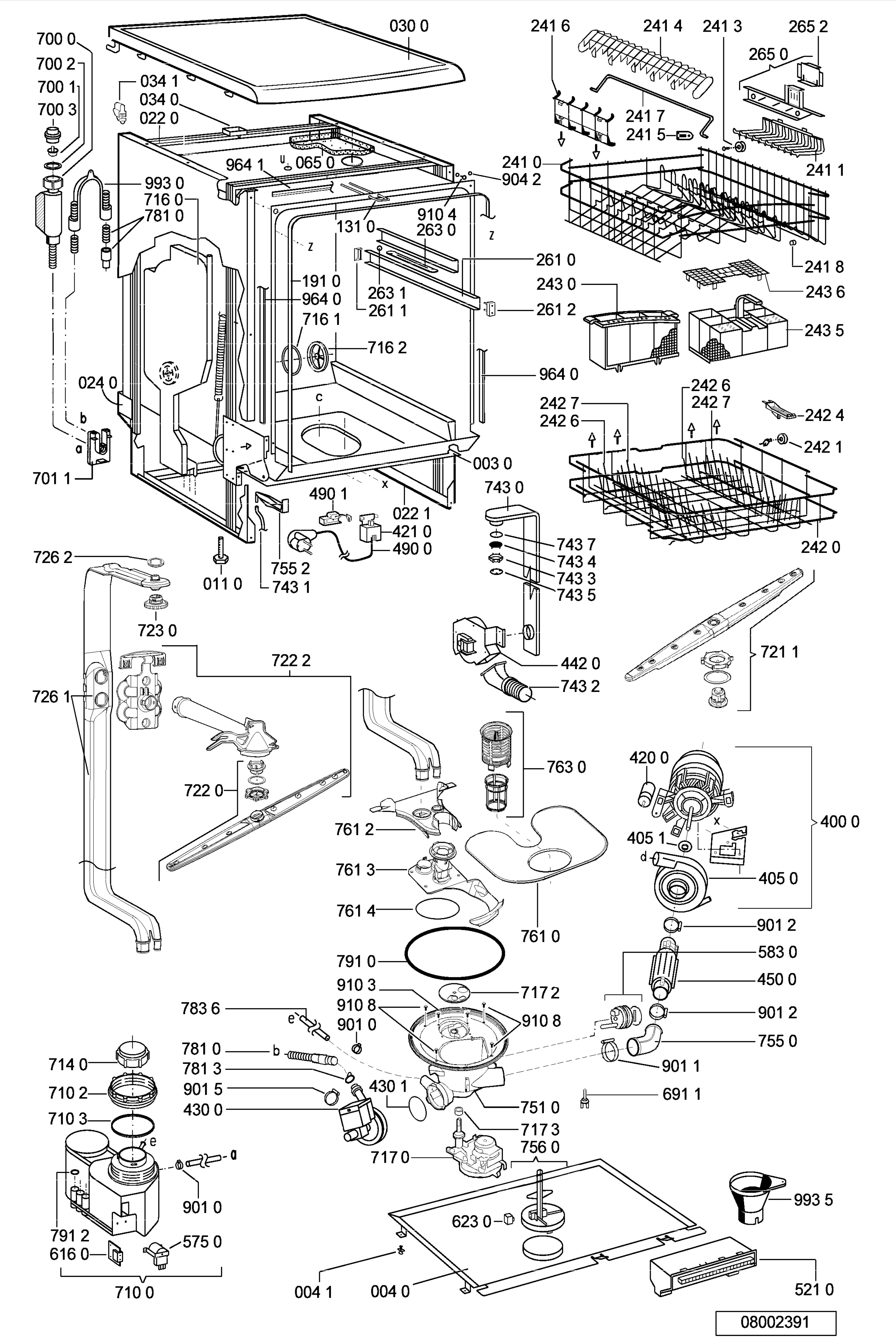
Pos. No.	12NC Code	Description
332 1	**4812 410 28735**	Button WH
400 0	**4812 361 58336**	Motor + spraypump cpl.
405 0	**4812 360 18509**	Spray pump
405 1	**4819 515 28158**	Gasket
420 0	**4812 121 18132**	Capacitor
421 0	**4812 121 18158**	Interf.filter
430 0	**4812 360 18508**	Pump,draining
430 1	**4812 466 68689**	Gasket
442 0	**4812 361 18196**	Blower cpl.
450 0	**4812 259 28684**	Heating element
480 0	**4812 321 28405**	Cable harness set
480 3	**4812 401 18418**	Protector f.wiring
490 0	**4819 321 18136**	Cable,mains 2m SA
490 1	**4812 321 28367**	Strain relief
521 0	**4812 214 78704**	Control board (CB)
531 0	**4812 273 18055**	Switch waterhardness
531 1	**4812 273 18056**	Wheel,fingertip
575 0	**4812 281 28361**	Regen.valve
583 0	**4812 271 28459**	Switch diaphragm (OWI)
616 0	**4812 281 18047**	Contact,reed salt
616 1	**4812 271 58161**	Contact,reed rinsing agent
620 0	**4812 310 28066**	User board KIT (DUB)
623 0	**4812 271 38356**	Microswitch
633 0	**4812 271 38355**	Microswitch door
680 0	**4812 418 68155**	Combidosage
680 1	**4812 466 68495**	Gasket
681 1	**4812 466 68497**	Gasket
681 2	**4812 440 18975**	Flap
682 0	**4812 466 68496**	Gasket
691 1	**4812 462 79769**	Stopper NTC
700 0	**4812 530 28804**	Hose, inlet aqua stop 4,2m
700 0	**4812 530 28848**	Hose, inlet aqua stop 2m
700 1	**4812 480 48096**	Sieve
700 2	**4812 466 68628**	Gasket
700 3	**4812 462 78307**	Reductor
701 1	**4812 310 18153**	Yoke clamp set
710 0	**4812 418 68151**	Monoblock
710 2	**4819 310 38536**	Threaded ring
710 3	**4819 466 69562**	Gasket set
714 0	**4812 462 78993**	Threaded cap
716 0	**4812 418 68147**	Reg.dosage
716 1	**4812 466 68475**	Gasket
716 2	**4812 462 78994**	Cover
717 0	**4812 281 28418**	Valve motordiverter
717 2	**4812 528 98011**	Valve disk diverter
717 3	**4812 530 29121**	Gasket diverter valve
721 1	**4812 360 68347**	Spray arm lower. cpl.
722 0	**4812 360 68348**	Spray arm upper wh
722 2	**4812 360 68349**	Spray arm 2nd level cpl. wh
723 0	**4812 360 68351**	Douche ceiling
726 1	**4812 530 29118**	Tube assembly cpl.
726 2	**4812 505 18208**	Nut
743 0	**4812 530 48134**	Air guide
743 1	**4812 530 28102**	Hose, inlet
743 2	**4812 440 19526**	Air guide lower

Spare part list

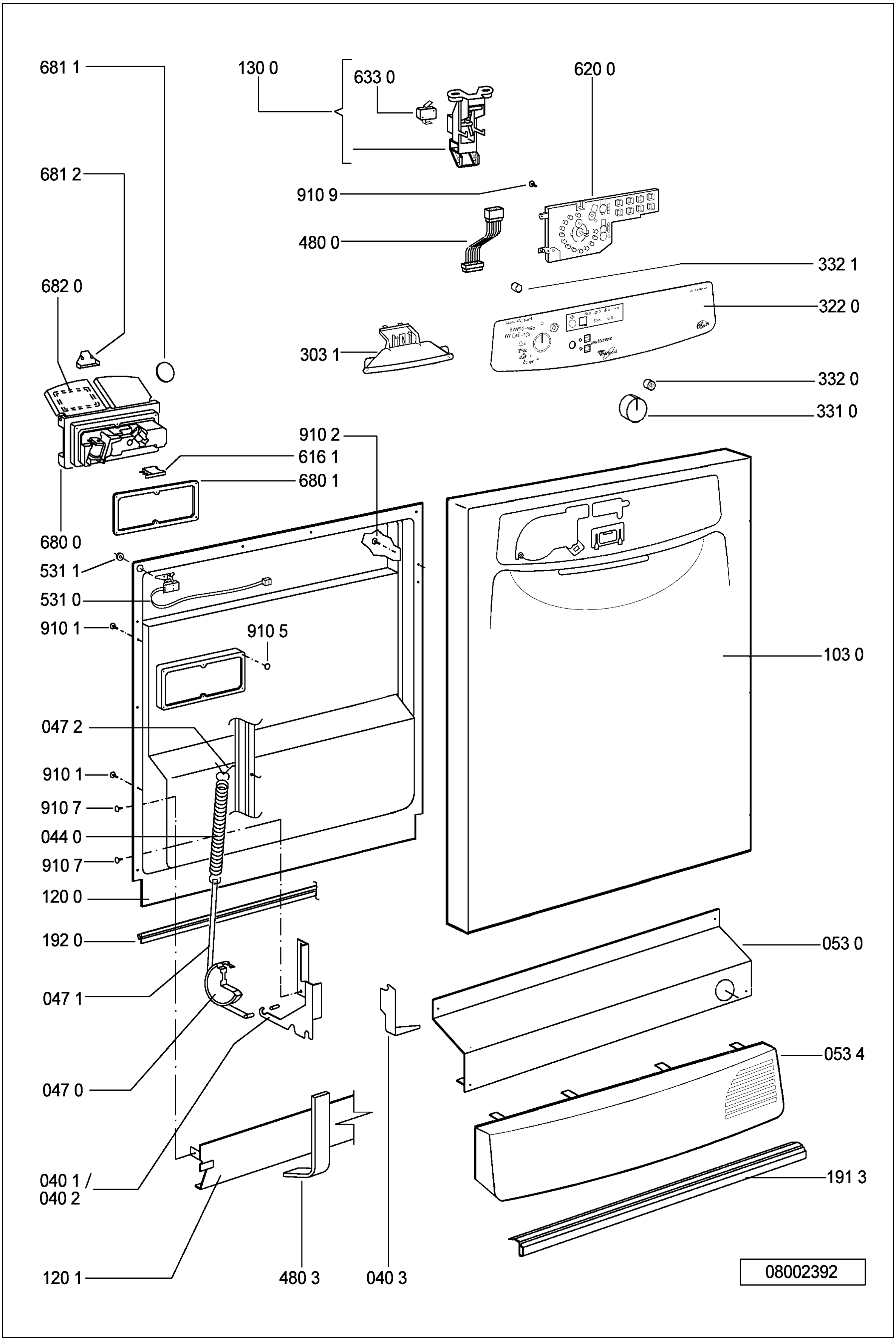
Model	**ADP 5967 WHM**
Service No.	**854296761720**
Version	**854296761720**

Pos. No.	12NC Code	Description
743 3	**4812 505 18364**	Nut
743 4	**4812 281 38001**	Valve disk
743 5	**4812 466 98934**	Disc
743 7	**4812 466 68514**	Gasket
751 0	**4812 418 18338**	Water collector
755 0	**4812 530 29119**	Bend
755 2	**4812 530 48148**	Tray,leak
756 0	**4812 360 58099**	Floater
761 0	**4812 480 58122**	Sieve fine
761 2	**4812 418 18337**	Cover sieve
761 3	**4812 418 18341**	Cover
761 4	**4812 530 58141**	O-Ring
763 0	**4812 480 58123**	Sieve coarse
781 0	**4812 530 29113**	Hose,draining
781 3	**4812 281 28417**	Flap non-return
783 6	**4812 530 28796**	Hose 10x3x180+10
791 0	**4812 532 68099**	Gasket
791 2	**4812 530 58093**	Gasket
901 0	**4822 401 10258**	Clamp,hose 10-18 mm
901 1	**4812 401 18424**	Strap 050,0
901 2	**4812 401 18157**	Strap 32-50/9 C61
901 5	**4812 401 48573**	Strap 028,6
904 2	**4812 462 79635**	Cover WH 3,5x5
910 1	**4812 502 38152**	Screw 4,8x19
910 2	**4812 502 18363**	Screw 4,0x12-H
910 3	**4812 502 18389**	Screw 5x20 T20
910 4	**4812 502 18385**	Screw M3,5x8-T15M
910 5	**4812 502 18393**	Screw 3,5x9-1 Tx15
910 7	**4812 502 18397**	Screw INOX A2 M 5X12
910 8	**4812 502 18527**	Screw 4x15 T20
910 9	**4812 502 18446**	Screw 3,5x16
964 0	**4812 466 68536**	Gasket housing ri/le
964 1	**4812 466 68469**	Gasket housing upper
993 0	**4819 530 29028**	Bow
993 5	**4822 532 80216**	Funnel salt

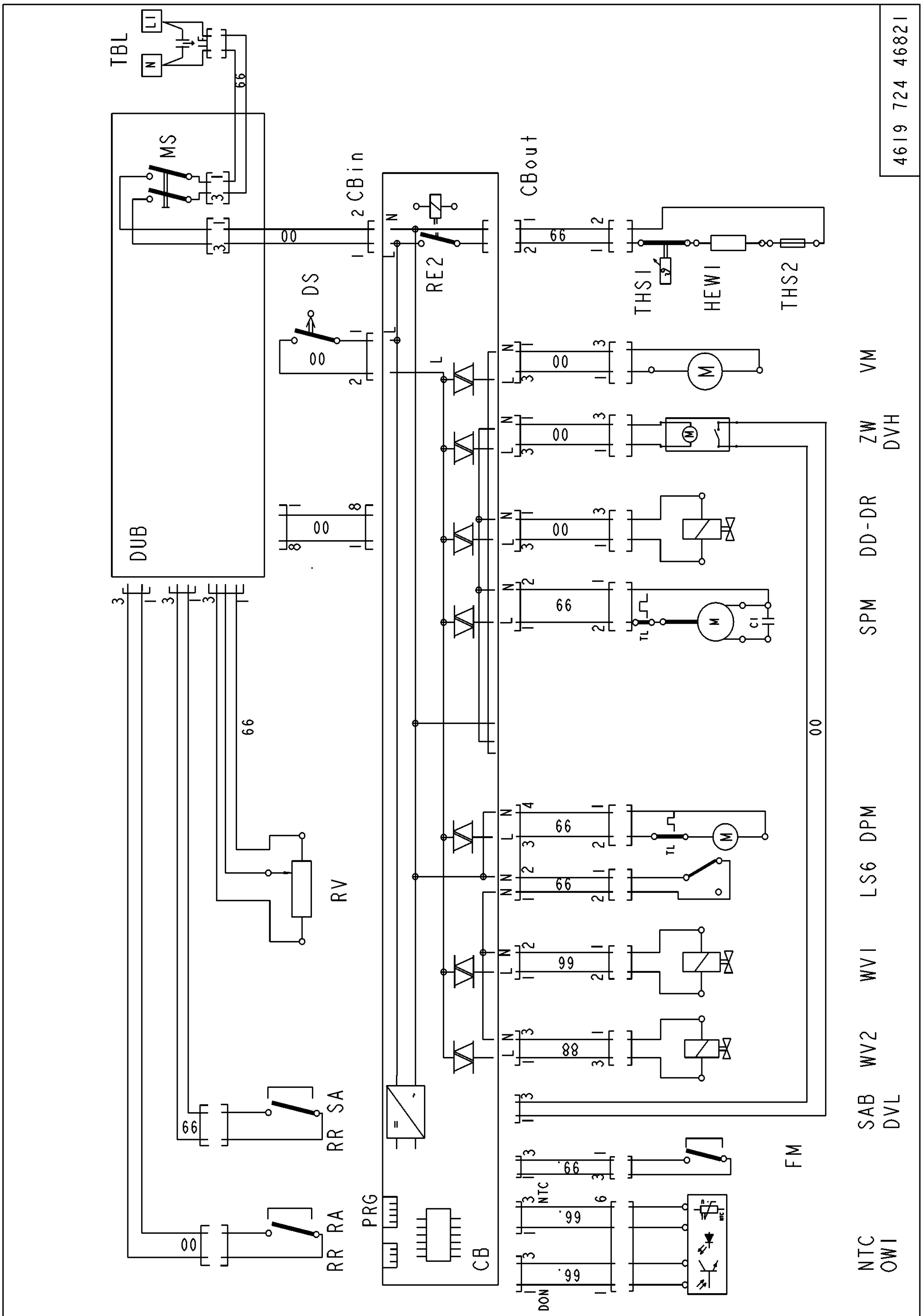
Exploded view



Exploded view



Circuit diagram



C1	Capacitor
CB	Control board
DUB	Display- and User board
DPM	Drain pump motor
DD	Cleaning agent dosage
DON	Turbidity sensor
DR	Final rinse dosage
DS	Door switch
DVH	Diverter ventil high
DVL	Diverter ventil low
FM	Flow meter
HEWI	Heating
IF	Interference filter
LS6	Water leakage switch
L	Line
MS	Main switch
NTC	Thermostat temp. sensor
N	Neutral
OWI	Water indicator, optical
PRG	Plug to program
RV	Water hardness switch
RE2	Heating relay
RR SA	Reed relay salt
RR RA	Reed relay rinsaid
SAB	Sprayarm blocked
SPM	Sprayarm motor
THS1	Safety thermostat
THS 2	Fuse
TBL	Power supply terminal
TL	Winding protective contact
VM	Fan ventilator
WV1	Water inlet valve
WV2	Water regenerating valve
WI	Water indicator
ZW	Zone washing
00	black
66	blue
88	grey
99	white

Connector Rast 2.5 on CB:
red marked:left hand side
black marked:right hand side

Program diagram

Program Table

Program		10	11	12	13	15	16	17	18	21	23	24	27	31	32	39	40
Auto Sensor	A10a		r	d	f	50	r	h	r	10			44	68	0,5	2	12
Sensor intensiv	A9a	50	r	d	f	54	r	70	r	8	i	6	44	68	0,5	2	12
Sensor Eco normal	A8a		r	d	f	41	r	h	r	10			44	68	0,5	2	12
Sani Rinse Program	A11a "Sani"		9			54	8	65	8	6			44	72	10	2	12
Intensiv Program 70°C (from production-week 08/02)	A7a[1]	50	20			68	45			8			44	63	0,5	2	12
Intensiv Program 70°C (for 60-Hz DW and others till prod.-week 07/02)	A7a	50	6			54	10	70	20	8		6	44	68	0,5	2	12
Normal Program 65°C	A6a		9			54	8	65	8	6			44	68	0,5	2	12
Normal Program 50°C	A5f		12			51	28			8			44	61	10	20	40
Normal Program 50°C	A5e		12			51	28			8			44	61	10	0	40
Normal Program 40°C	A5d		12			40	30			6			44	53	0,5	2	12
Normal Program 50°C	A5c		12			49	35			10			44	63	0,5	20	20
Normal Program 50°C	A5b		12			49	35			10			44	67	0,5	2	38
Normal Program 50°C	A5a		12			51	28			8			44	61	10	2	23
Eco Program 50°C	A4a					54	16			6			44	68	0,5	2	12
Express Program 30°C	A3a					36	8			4			44	48	0,5	2	
Glasses program 40°C	A2a					40	8			6			44	55	0,5	2	12
Prewash program cold	A1a		12														

Steps

Step	Phase	Parameter	Function of the machine	Diverter valve DVM
1		t3 + 30 s	Startposition for all progr. / draining	
2	Back rinse – only after regeneration (PS1)	FM	filling + draining (1ltr.)	
3	Back rinse – only after regeneration	3 s	pause	
4	Back rinse – only after regeneration	FM	filling + draining (1ltr.)	
5	Back rinse – only after regeneration	3 s	pause	
6	Back rinse – only after regeneration	FM	filling + draining (1ltr.)	
7	Back rinse – only after regeneration	3 s	pause	
8	Back rinse – only after regeneration	10 s	draining	
9	Prewash	FM	filling - rinsing	1U / 3L
10	Prewash	T2 = °C	rinsing - heating	1U / 3L
11	Prewash	min	rinsing	1U / 3L
12	Prewash	t3 + 30 s	rinsing - draining	1U / 3L
13	Mainwash (PS2)	FM	filling - rinsing	5U / 3L
14	Mainwash	30 s	rinsing - dos detergent	5U / 3L
15	Mainwash	T2 = °C	rinsing - heating	5U / 3L
16	Mainwash	min	rinsing	5U / 3L
17	Mainwash	T2 = °C	rinsing - heating	5U / 3L
18	Mainwash	min	rinsing	5U / 3L
19	Mainwash	t3 + 30 s	rinsing - draining	5U / 3L
20	Intermediate rinse step 1	FM	filling - rinsing	2U / 2L
21	Intermediate rinse step 1	min	rinsing	2U / 2L
22	Intermediate rinse step 1	t3 + 30 s	rinsing - draining	2U / 2L
23	Intermediate rinse step 2	FM	filling - rinsing	2U / 2L
24	Intermediate rinse step 2	min	rinsing	2U / 2L
25	Intermediate rinse step 2	t3 + 30 s	rinsing - draining	2U / 2L
26	Clear rinse	FM	filling - rinsing	2U / 2L
27	Clear rinse	T2 = °C	rinsing - heating	2U / 2L
28	Clear rinse	30 s	rinsing - dos. rinse aid + heat.	2U / 2L
29	Clear rinse	30 s	rinsing - heating	2U / 2L
30	Clear rinse	30 s	rinsing - dos. rinse aid + heat.	2U / 2L
31	Clear rinse	T2 = °C	rinsing - heating	2U / 2L
32	Clear rinse	min	rinsing	2U / 2L
33	Clear rinse	t3 + 30 s	draining - regenerating	2U / 2L
34	Drying (PS3)	1,5 min	drying - regenerating	
35	Drying	1 s	drying - regenerating - filling	
36	Drying	3 s	drying - regenerating	
37	Drying	1 s	drying - regenerating - filling	
38	Drying	30 s	drying - draining	
39	Drying	min	drying - without Fan	
40	Drying (PS4)	min	drying - with Fan	
41	Drying	t3 + 30 s	drying - draining	
42		End	End	

Contacts:
- Water inlet valve WV1
- Regenerating valve 2 WV2
- Drain pump DPM
- Heating relay RE2
- Spray pump SPM
- Dosage detergent + rinse aid DD-DR
- Diverter valve DVM
- Ventilation drying (optional) VM

□ no program function
■ contact or triac closed
FM ⎍⎍ amount of water
t2 heating up to temp.
t3 draining time up to the waterindicator is low

d : drain out depends on soil level
f : water fill if (d) water was drained out
h : heating up to 40°C till 70°C depends on soil level
r : rinsing time 0 min. till 12 min. depends on soil level
i : 2nd intermediate rinse depends on soil level

XU = Upper spray arm working
XL = Lower spray arm working
X = time in min.

Function diagram
Point alternating wash

(Ä06: 4619 724 44191/06)
18.11.2003

4619 724 44191-1

Text/Legend

Test procedure for SERVICE-TEST-PROGRAM Point dishwashers appliances with and without 7 Segment Display

Switch on the appliance. If there is no failure indicated, then:

1. Start the passive test program.
   If there is a defective component indicated, open the plinth and take out the control board (CB).

2. Check the component.
   Unplug the indicated component from the control board (CB) and check it by using an Ohmmeter
   If the resistance is not correct, check the cables to the component and check the component itself.

3. Visibly check the control board (CB).

4. At the end of the repair start the appliance and delete the failure. After this, start the passive and active test program again to see that the failure is solved.

More details: see following pages.

Attention:

Danger for short circuit. Short circuits on components can damage the control board (CB).
If electronic boards are wet, do not switch the appliance on.
To check the appliance, plug in the appliance.
Failures, which occurred during the program will be stored and indicated by flashing the start LED.
The failure will be indicated and can be related to the failure table.
To erase the failures, you must push the start button longer than 1,5 seconds.
The failures F1 NTC break
F2 water leakage
F9 continuous water inlet
are checked and indicated immediately after start of the program.
Therefore these failures have to be solved before starting the active test program.

When these failures are not solved, the active test program does not run.

The electrical components get their voltage via triac from the control board (CB). To test the voltage the voltmeter must be connected in parallel to the component (the component must be connected). If the component is disconnected, then the output voltage from the control board (CB) is reduced.

After starting a program this program is locked. That means neither by unplugging/switching off the appliance nor by setting to another program, the first set program cannot be changed. Changing of the program is only possible by pushing the start button again for longer than 1,5 sec..

Attention: New service control boards start at first with the service test program. This test program is without back rinsing. Dangerous for overfilling the appliance, in case the appliance is not empty. By running the test program or another program a second time, the back rinsing will be carried out as usual.

4619 724 43901-1

Text/Legend

Handling of failures

F0 Sensor failure (only when a dirt sensor is installed)
Will not be indicate to the customer. The programs will finish even if there is a failure. The Failure is indicated only in the active test program after 10 – 30 second's. The active test program will finish as well, even if there is a failure.
If the failure in a sensor program appears, the machine will always choose the highest consumption (best cleaning result).
- None or wrong output from the sensor
- Unlogical or unreal measurement results

Reason:
- Defective electronic of the sensor
- Optoelectronic parts in the sensor defect
- The sensor is very dirty
- Connection between sensor and control board (CB) interrupted

Attention: The failure code will not store.

F1. NTC break
Temperature out of the normal value (-3°C till +85°C)
- Temperature inside higher than +85°C
- NTC defective
- Dishwasher is frozen, less than -3°C

If the temperature is less than -3°C, fill the appliance with a cup of warm water to warm it up before you start it..

F2. Water Leakage
- Water is in the drip tray

Floater (LS6) switches off the WV1 and the electronic switches on the DPM until WI reports that it is empty.

F3. Heating System Defective
Indicated after app. 25 minutes (1. check after 5 min., after that follow 2 more checks, before the failure is indicate)
- Heats too slowly (less than 1,5 °C in 10 min.)
- Heating (HEW) defective
- Relays (RE2) on control board (CB) is defective
- NTC - resistance fluctuation

F4. Draining Failure
Drain pump starts and after 4 min. the WI detects that it is "not empty"
- Drain pump (DPM) defective
- Siphon closed
- Control board (CB) defective
- OWI/WI defective.

Text/Legend

F6. Water Tap Closed
Water valve (WV1) is switched on but flow meter (FM) sends no impulses (less than 10 imp. in 10 sec.) and the water indicator (WI) is off (empty)
- Water tap closed
- Water inlet hose blocked
- Water inlet valve (WV1) defective
- Flow meter (FM) defective (leads to FM failure)

F7. Flow Meter Failure
Water inlet valve (WV1) is switched on and the water indicator (WI) is on (full).
- Flow meter (FM) sends too few impulses (less than 10 imp. in 10 sec.)
- Water tap closed during water inlet
- Water inlet hose blocked
- Water inlet valve (WV1) defective
- Flow meter (FM) defective

F8. Water Level Failure.
Failures are supervised over the whole program.
Mechanical water indicator WI: Spray pump works, the WI switches more than 20 times in 2 minutes back.
Optical water indicator OWI: Always after the OWI-Signal is missing, the electrical components are turned off for 5 sec. If after the 5 sec. the OWI-Signal is still not present then, it notes a Failure F8. If, however, after the 5 sec. the OWI-Signal is present, then the water-level is filled to 6 Ltr. and the electrical components are again turned on. After the OWI signal is missing for a second time note an F8 Failure.
- WI defect? Should switch on after approx. 1 Ltr
- Sieve blocked
- Water strongly foams
- Pot has turned off and is filled with spray water
- No stable spray pump (SPM) working

F9. Continuous Water Inlet
Water inlet valve (WV1) is switched off, water indicator (WI) on, flow meter (FM) sends impulses (more than 10 imp. in 10 sec.)
- Water inlet valve (WV1) mechanically not closed
- Triac (CB) permanently switched on. (short circuit)
Reaction: interval 30 sec. drain pump on / 20 sec. drain pump off in interval

The following failures will only be indicated, when the relevant component is installed.

Text / Legend

FA. OWI (Optical Water Indicator) – Failure

If the electronics signals of the Flow meter for the 3,4 Ltr. of water has been received on permanent wash system and 2,5 Ltr on alternating wash system and the OWI signal "Water in the sump" is missing then take note.

- Lens will be cleaned: Water inlet off for 10 Sec and SPM on for 10 Sec.
- If after that there is still no signal "Water in sump", then the appliance goes into failure mode FA.

FB. MDV (Motor Diverter) – Failure

Failure condition:

Start water inlet. After 15 sec. switches the WI. After that, when not within 120 sec. comes a signal from the MDV to the control board, lower or upper spray arm is functioning, then the FB will indicate.

Check:

- Do the upper and lower spray arms alternate turns in approx. 30-40 sec.? If only one turns then there is a failure.
- Is the diverter disc in the sump blocked? Yes, unblock it.
- Does 230V come from the control board (ZW,DVH) to the MDV? No, change control board. How to check:
  Start test program and wait until backrinse is over. After the start of the regular water-inlet must come 230V within 30 sec. for approx. 20 sec. to the MDV.
- Is the winding of the MDV or cable to the MDV interrupted? (ZW,DVH) resistance of the MDV should be approx. 6,3 KΩ
- Is the signal cable between the MDV and control board (SAB,DVL) carrying 5v?

FC. ASA (Automatic Salt Adaptation)/ Water hardness sensor Failure

(only indicates in the active test program)

Failure condition:

Electronic on the water softener detects high electrical resistance in the resin.

Check:

Cables on the sensors of the water softener interrupted or weak contact? Cables from the control board (ASA) to WHS electronic on the water softener interrupted or weak contact?

For salt, rinse aid, zone wash valve, sieve valve failure see active test program.

Text/Legend

Failure Display POINT

Appliances with 1 and 2-digit 7 Segment Display and without 7 Segment Display

Alarm / Failure	Failure code, Indication in test program when a failure occurs	
	Shown with 7 segment display or without 7 segment display	Shown on 2/3 digit 7 segment display
F1 NTC-Failure	START ☼ 1 x flash 1s Pause 1 x flash......	F1
F2 Water Leakage	START ☼ 2 x flashes 1s Pause 2 x flashes......	F2
F3 Failure in Heating System	START ☼ 3 x flashes 1s Pause 3 x flashes......	F3
F4 Draining Failure	START ☼ 4 x flashes 1s Pause 4 x flashes......	F4
F6 Water Tap closed	START ☼ 6 x flashes 1s Pause 6 x flashes......	F6
F7 Flow Meter Failure	START ☼ 7 x flashes 1s Pause 7 x flashes......	F7
F8 Water Level Failure	START ☼ 8 x flashes 1s Pause 8 x flashes......	F8
F9 Continuous Waterinlet	START ☼ 9 x flashes 1s Pause 9 x flashes......	F9
F0 Sensor-Failure (Only displayed in act. test program)	START ☼ 10 x flashes 1s Pause 10 x flashes......	F0
FA OWI-Fehler	START ☼ 11 x flashes 1s Pause 11 x flashes......	FA
FB MDV-Fehler	START ☼ 12 x flashes 1s Pause 12 x flashes......	FB
FC ASA-Fehler (Only displayed in act. test program)	START ☼ 13 x flashes 1s Pause 13 x flashes......	FC

☼ **LED flashing**

– "Rotor blocked (F5)" isn't displayed on the POINT appliance

Text/Legend

With the passive test program, you can check all LED's and buttons. If there is no failure the passive test program runs normally.

Attention:
If you can't start the active test program (Start button doesn't flash), normally there is one of the following failures detected: F1, F2 or F9

When these failures are not solved before, the passive and active test program will not run. After solving the failure you must "sign" (erase) the failure.

A present failure will be indicate directly after you switch on the appliance. Then fix the mistake, erase failure and start test program again (see following start procedure).

Start procedure

Start the passive test program if there is no failure indicated

If there is no failure the passive test program runs normally.

Start
PS1 - PS4 flashes in rhythm.
Option LED lights (if chosen)
chosen program LED lights
Finish passive test program by starting active test program

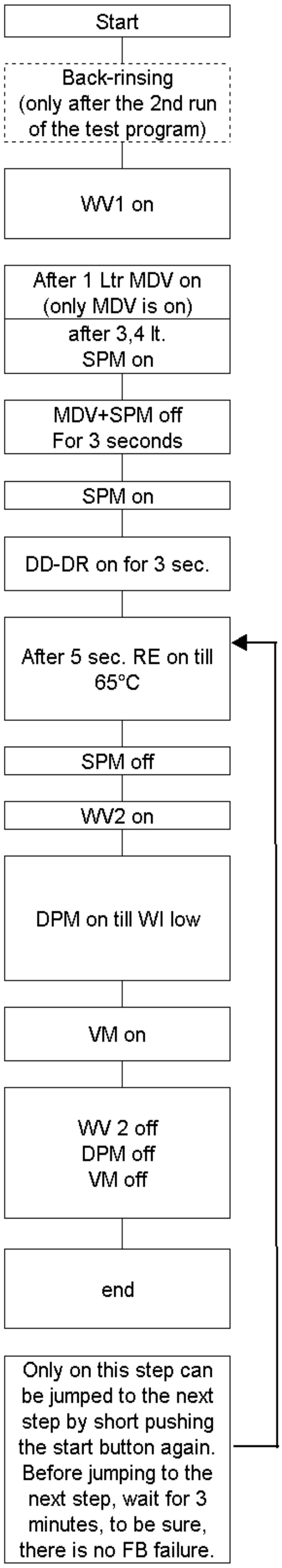
1. Turn OFF appliance
2. Push start button and hold it.
3. Select program position 1.(turn to the right or with WP VBL turn to the left)
4. Finish pushing the start button when the start LED flashes.
5. Test all LEDs by operating the buttons and the program knob. After the check, turn the program knob on to program place 1
6. Start the active test program by pushing the start button again
7. Failure indication.
8. Repair the failure
9. Solve the failure by pushing the start button for longer than 1,5 sec.
10. Start the active test program again, to see, if the failure is really solved

Active test program starts (see next page)

PS1	1.LED	prewash		
PS2	2.LED	mainwash intermediate rinse final rinse		
PS3	3.LED	drying (regeneration)		
PS4	4.LED	end	goes off if any button is pushed	goes off if after 30 min prog. Is finished

Text/Legend

Active test program



Remarks

The active test program runs to the failure position and stops or, if there is no failure, it runs to the end.

To leave the test program push the start button for longer than 1,5 second's.

Not enough salt or rinse aid will not stop the running of the appliance.

Remark When switching off the main switch or interrupting the mains, during the test program runs, then the alternating of the spray arms changes in the test program from 30/30 sec. to the rhythm of the main wash 5/3 min.

Important Leaving the test program is possible by making a break by the customer (Pushing the start button for more than 1,5 sec.).
After finishing the test program (End LED shines and/or Start LED goes off) then the appliance must be switched off.
If this is not done, then the next main wash will be made with the frequency of the Service Test Program ~30/30 sec. instead of 3/5 min.

When the failure position is reached the failure indication is indicated on the page "Failure Codes"

Attention:
If you can't start the active test program (Start button doesn't flash), normally there is one of the following failures detected: F1, F2 or F9

When these failures are not repaired before, the active test program will not run. After solving the failure you must "sign" (erase) the failure.